



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,324	07/18/2003	Feihong Chen	129250-000979/US	2523
32498	7590	05/29/2009	EXAMINER	
CAPITOL PATENT & TRADEMARK LAW FIRM, PLLC			MOORE, IAN N	
P.O. BOX 1995			ART UNIT	PAPER NUMBER
VIENNA, VA 22183			2416	
MAIL DATE	DELIVERY MODE			
05/29/2009	PAPER			

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment, filed 5/18/09, with respect to objected claims 1, 3-5, 7, 8 and 25-29 have been fully considered and accepted. The amended to claims 1, 3-5, 7, 8 and 25-29 will be entered upon appeal. Upon entering these amended upon appeal, the claim objection will be withdrawn.

### ***Response to Arguments***

2. Applicant's arguments filed 5/18/2009 have been fully considered but they are not persuasive.

**Regarding claims 1, 3, 4, 8, 11, 12, 17, 19, 20, 25-29, the applicant argued that,** “(a) Kanakubo does not disclose the claimed ingress region, fault detection... (b) Kanakubo does not disclose the associated of a primary path’s, original IP address to an alternate path “ in pages 7-10.

**In response to applicant's argument, the examiner respectfully disagrees** with the argument above.

**In response to applicant's arguments** against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, the rejection is based on the combined system of Kanakubo and Skalecki as set forth below.

Kanakubo discloses a network device processing a method (see FIG. 1, LSR-P 1) comprising: means for detecting a failure (see FIG. 2, LSR 1 receiving/detecting fault occurrence a1) along an ingress region of a primary path (see FIG. 1, receiving fault indication along input/ingress side of normal LSP; see page 2, paragraph 25-30); and means for re-routing traffic (see FIG. 1, LSR-P performing LSP switching) from the primary path associated with an original IP address (see FIG. 1, from a normal path corresponding to protection point IP address) to an alternate path (see FIG. 1, to bypass LSP; see page 2, paragraph 29-36) which includes the device using a forwarding table (see FIG. 3, using LSP fault indication retrieval table) that includes Internet Protocol (IP) (see FIG. 3, IP address of the protection point) and Multi-Protocol Label Switched (MPLS) routing information (see FIG. 3, entry type and entry) while associating the original IP address to the alternate path upon detection of the failure (see FIG. 3, LSP fault indication retrieval table associates IP address of protection point to the bypass path when receiving fault indication; see page 3, paragraph 39-53).

Skalecki teaches a source network device (see FIG. 2-3, Node A) operable to: means for detecting a failure along in ingress region of a primary path (see FIG. 2-3, detect a fault along in the input/ingress area/region of the working path W1; see page 3-4, paragraph 34-43); means for re-routing traffic from the primary path to an alternate path (see FIG. 2, 3, switch the traffic from working path W1 to protection path P1; see page 3-4, paragraph 39-48); means for allowing traffic to travel along the primary path when the failure is no longer detected along the ingress region (see FIG. 5, Switching Node switches the traffic from protecting path to working path when the restoring path message is received along in the input/ingress

**area/region of the working path W1; see FIG. 6, S602-608; see page 2, paragraph 20-23; see page 4-5, paragraph 55-59).**

In view of the above, it is clear that the combined system of Kanakubo and Skalecki clearly disclose the broadly claimed invention.

**Regarding claims 5, 7, 8, 13, 15, 16, 21, 23, 24, the applicant argued that, “(a) Kanakubo does not disclose maintaining the same qos, (b) maintenance of a primary path's, original IP address...Skalecki does not make up for the deficiencies of Kanakubo..” in page 10-11.**

**In response to applicant's arguments** against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, the rejection is based on the combined system of Kanakubo and Skalecki as set forth below.

Kanakubo discloses means for re-routing traffic, after receiving, (see FIG. 1, LSR-P performing LSP switching) from a primary path associated with an original IP address (see FIG. 1, from a normal LSP path corresponding to protection point IP address; see page 2, paragraph 25-30) to an alternate path (see FIG. 1, to bypass LSP; see page 2, paragraph 29-36) using a forwarding table (see FIG. 3, using LSP fault indication retrieval table) that includes IP see FIG. 3, IP address of the protection point) and MPLS routing information (see FIG. 3, entry type and entry), said means for re-routing maintaining the original address (see FIG. 3, LSP fault indication retrieval table associates IP address of protection point to the bypass path; see page 3, paragraph 39-53), the alternate path comprising devices (see FIG. 1, LSR 4 and LSR 5) which

maintain the same quality of service as the primary path (see page 1, paragraph 17; see page 3, paragraph 37, 54; see page 4, paragraph 60; bypass LSP comprising LSR 4 and LSR 5 and bypass LSP utilizes the same QoS policy as normal LSP since it is predefined/static LSP)  
and are not a part of the primary path except for the network device and a destination network device (see FIG. LSR 4 and 5 are not part of the normal LSP except LSR-P 1 and LSR-6; see page 2, paragraph 25-32).

Skalecki teaches re-routing traffic from the primary path to an alternate path (see FIG. 2, 3, switch the traffic from working path W1 to protection path P1; see page 3-4, paragraph 39-48); allowing traffic to travel along the primary path when the failure is no longer detected along the ingress region (see FIG. 5, Switching Node switches the traffic from protecting path to working path when the restoring path message is received along in the input/ingress area/region of the working path W1; see FIG. 6, S602-608; see page 2, paragraph 20-23; see page 4-5, paragraph 55-59).

In view of the above, it is clear that the combined system of Kanakubo and Skalecki clearly disclose the broadly claimed invention.

**Regarding claims 1, 3-5, 7-9, 11-13, 15-17, 19-21, 23-24, the applicant argued that,**  
“...Dantu does not disclose the alternative paths...(b)...the associated of a primary path’s, original IP address to an alternate path or the maintenance of such an IP address ...neither Skalecki nor Anderson make up for the deficiencies of Dantu...” in pages 11-13.

Dantu discloses means for detecting (see FIG. 4, a combined system of processor 402, memory 404, and interface 412 performing examining/detecting; see col. 9, line 30 to col. 11,

line 26; or see FIG. 5, a combined system of processor 502, memory 504, and interface 512 performing examining/detecting; see col. 12, line 39-64; see col. 13, line 30-40) a failure along an ingress region of a primary path (see FIG. 3, a failure occurs on a working path 332 between node 344 and 348; see FIG. 9, step 902; see FIG. 10, step 1002; see col. 9, line 30, line 63; see col. 17, line 10-20,45-55; see col. 10, line 25-36); and means for re-routing traffic (see FIG. 4, a combined system of processor 402, memory 404, storage 406 performing switching to protecting path ring in node 400; see col. 9, line 30 to col. 11, line 26; or see FIG. 5, a combined system of processor 502, memory 504, and storage 506 performing switching to protecting path ring in node 500; see col. 12, line 39-64; see col. 13, line 30-40) from the primary path associated with an original IP address (see FIG. 7, IP address 712/08) to an alternate path (see FIG. 3,6, protection path 336; see FIG. 7, a label 716 with path route) which includes the device using a forwarding table that includes Internet Protocol (IP) and Multi-Protocol Label Switched (MPLS) routing information (see FIG. 3, Forwarding table 312 and/or routing table 308; see FIG. 4, a combined system of memory 404 (e.g. routing table 404 A and forwarding table 404B) and storage 406 (e.g. table formation 406A and protection switching 406B) in node 400 includes IP addresses corresponding to MPLS labels; or see FIG. 5, a combined system of memory 504 (e.g. forwarding table 504A) and storage 506 (e.g. forwarding logic 506) in node 500 includes IP addresses corresponding to MPLS labels; see FIG. 10, S 1004, see FIG. 11, S 1104,1106; see col. 9, line 50 to col. 10, line 32; see col. 11, line 10-40; see col. 12, line 40-64; see col. 13, line 30-45; see col. 14, line 45-67; see col. 15, line 23-65; see col. 18, line 45-55; see col. 19, line 35-45) while associating the original IP address to the alternate path upon detection of the failure (see FIG. 4,5; see FIG. 10, S 1006,1008,1010; see FIG. 11, S 1108; see col. 9, line

50 to col. 10, line 32; see col. 11, line 10-40; see col. 12, line 40-64; see col. 13, line 30-45; see col. 14, line 45-67; see col. 15, line 23-65; see col. 18, line 45-55; see col. 19, line 35-46; switching IP address with its corresponding new label to the protection path when detecting a failure).

Dantu also discloses means for re-routing traffic (see FIG. 4, a combined system of processor 402, memory 404, storage 406 performing switching to protecting path ring in node 400; see col. 9, line 30 to col. 11, line 26; or see FIG. 5, a combined system of processor 502, memory 504, and storage 506 performing switching to protecting path ring in node 500; see col. 12, line 39-64; see col. 13, line 30-40) from a primary path (see FIG. 3, a working path 332; see FIG. 9, step 902; see FIG. 10, step 1002; see col. 9, line 30, line 63; see col. 17, line 10-20,45-55; see col. 10, line 25-36) associated with an original IP address (see FIG. 7, IP address 712/08) to an alternate path (see FIG. 3,6, protection path 336; see FIG. 7, a label 716 with path route) using a forwarding table that includes IP and MPLS routing information (see FIG. 3, Forwarding table 312 and/or routing table 308; see FIG. 4, a combined system of memory 404 (e.g. routing table 404 A and forwarding table 404B) and storage 406 (e.g. table formation 406A and protection switching 406B) in node 400 includes IP addresses corresponding to MPLS labels; or see FIG. 5, a combined system of memory 504 (e.g. forwarding table 504A) and storage 506 (e.g. forwarding logic 506) in node 500 includes IP addresses corresponding to MPLS labels; see FIG. 10, S 1004, see FIG. 11, S 1104,1106; see col. 9, line 50 to col. 10, line 32; see col. 11, line 10-40; see col. 12, line 40-64; see col. 13, line 30-45; see col. 14, line 45-67; see col. 15, line 23-65; see col. 18, line 45-55; see col. 19, line 35-45), said means for re-routing maintaining the original address (see FIG. 4,5; see FIG. 10, S 1006,1008,1010; see FIG. 11, S

**1108; see col. 9, line 50 to col. 10, line 32; see col. 11, line 10-40; see col. 12, line 40-64; see col. 13, line 30-45; see col. 14, line 45-67; see col. 15, line 23-65; see col. 18, line 45-55; see col. 19, line 35-46; switching IP address with its corresponding new label to the protection path), the alternate path comprising devices (see FIG. 3, intermediate nodes 348) which maintain the same quality of service as the primary path (see FIG. 10, S 1106,1008,1010; FIG. 11, S 1104-1108; see col. 9, line 50 to col. 10, line 32; see col. 11, line 10-40; see col. 12, line 40-64; see col. 13, line 30-45; see col. 14, line 45-67; see col. 15, line 23-65; see col. 18, line 45-55; see col. 19, line 35-46; assigning QoS level of IP packet in the working path to the same QoS level in the protection path while creating a new label) and are not a part of the primary path except for the network device and a destination network device (see FIG. 3, intermediate node 348 are not part of the working path; see col. 8, line 60 to col. 9, line 62).**

Skalecki teaches means for detecting a failure along in ingress region of a primary path (see FIG. 2-3, **detect a fault along in the input/ingress area/region of the working path W1; see page 3-4, paragraph 34-43**); means for re-routing traffic from the primary path to an alternate path (see FIG. 2, 3, **switch the traffic form working path W1 to protection path P1; see page 3-4, paragraph 39-48**); means for allowing traffic to travel along the primary path when the failure is no longer detected along the ingress region (see FIG. 5, **Switching Node switches the traffic from protecting path to working path when the restoring path message is received along in the input/ingress area/region of the working path W1; see FIG. 6, S602-608; see page 2, paragraph 20-23; see page 4-5, paragraph 55-59**).

In view of the above, it is clear that the combined system of Kanakubo and Skalecki clearly disclose the broadly claimed invention.

**In response to argument** on “ingress region”...such definitions are not required in the claim”, since applicant is not required to recites “the definition” of "ingress region", examiner is not required to provide any specific meaning of “ingress region”. Thus, examiner assertions are reasonable assertion on the broadly claimed invention.

Applicant broadly claimed invention recites "detect a failure along an ingress region of a primary path".

1) Nowhere in the claimed limitation that recites exactly where the failure occurs and what consists of an ingress region. Thus, “in ingress region” can be any where in the network as long as the region is input/incoming region/area/paths of the network. Clearly, Kanakubo FIG. 1 discloses “input/incoming region/area/paths” as set forth in the rejection in the past and this instant rejection.

2) Although applicant does not recite any specific detail "detect a failure along an ingress region of a primary path", applicant repeatedly and incorrectly defining where the failure occurs and exactly what consists of an ingress region in the Kanakubo reference. Thus, the arguments on specific details in Kanakubo based on incorrect assuming is irrelevant and clearly an error.

3) Examiner interpretation is very reasonable since the claim invention is broad. Applicant detailed explanation and interpretation of the “ingress region” is not being claimed in every claim. Examiner can asserts Kanakubo in every part of the broad claimed invention. In fact, one skill in the ordinary art will clearly see that examiner assert the plain meaning of the words and definition of “ingress region” in Kanakubo FIG. 1.

**In response to argument** on a forwarding table, the claim inventing recites "the device using a forwarding table". Thus, the device can use any forwarding table regardless its location.

Kanakubo's LSR-P receives fault notification which is used by a forwarding table of LSR-F and LSR-P that included IP and MPLS routing information as set forth below. Thus, it is clear that the augments based on LSR-F and LSR-P being two different devices is irrelevant and clearly an error.

**In response to applicant argument** on examiner interpretation, it is noted that none of the independent claim 1, 5, 9, 13, 17 recites "(a) a link associated with a source network device, (b) an outgoing link (from the source network device), or (c) a link between the source network device and a neighboring network device". Thus, the argument on limitations that are not even recited in the claims is irrelevant.

**In response to applicant argument**, Kanakubo disclose that "ingress region" is

- (a) a link associated with source network device (see FIG. 1, input/ingress side/region comprises a link/path (e.g. a link/path between LSR 1, 2, 3,6) associated with LSR-1; see page 2, paragraph 25-30),
- (b) the link comprises either an outgoing link (see FIG. 1, a link/path is the transmit/output/outgoing link of Node LSP-1) or
- (c) a link between the source network device and a neighboring network device (see FIG. 1, a link/path between LSR-1 and LSR-6; see page 2, paragraph 25-30).

Skalecki teaches a source network device (see FIG. 2-3, Node A) operable to: detecting a failure along in ingress region of a primary path (see FIG. 2-3, detect a fault along in the input/ingress area/region of the working path W1), where the ingress region comprises

- (a) a link (see FIG. 2-3, input/ingress area/region comprises a path/link/connection) associated with the source network device (see FIG. 2-3, associated/related with Node A),

(b) the link comprises an outgoing link (see FIG. 2-3, link/path/connection comprising outgoing/transmit link/line/connection) or

(c) a link between the source network device and a neighboring network device (see FIG. 2, 3, link/path/connection between Node A and Node K; see page 3-4, paragraph 34-43).

In view of the above, it is clear that the combined system of Kanakubo and Skalecki clearly discloses the applicant broadly claimed invention, and examiner interpretation is proper.

**In response to argument** on the usage of phrase "primary path", Dantu discloses "working path" which examiner asserts as "primary path" since they both have identical functionality of primarily carrying data until failure. Thus, Dantu clearly discloses the argued limitation.

**In response to applicant's** argument that the references fail to show certain features of applicant's invention **based on specification**, it is noted that none of those specific features relevant to "**ingress region**" and **primary path**" recited in the specification are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

**/Ian N. Moore/**

**Primary Examiner, Art Unit 2416**